Code No: P21ADT01

HALL TICKET NUMBER

PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE
(AUTONOMOUS)
II B.TECH I SEMESTER END SUPPLEMENTARY EXAMINATIONS, MARCH/APRIL - 2023
JAVA PROGRAMMING
(COMMON TO AIDS, AIML BRANCHES)

Time: 3 hours   Max. Marks: 70

Answer all the questions from each UNIT (5X14=70M)

Q.No.		Questions	Marks	CO	KL
		UNIT-I			
1.	a)	Explain the different elements or tokens that make up a Java program. What is the significance of CLASSPATH environment variable?	[7M]	1	3
	b)	Explain the difference between a static variable and a non-static variable in Java. Also illustrate static method with sample code.	[7M]	1	3
		OR			
2.	a)	Demonstrate the difference between break and continue statements with sample Java program.	[7M]	1	3
	b)	Write a Java Program to check whether the given Year is leap or not? If a year is divisible by 100 and not by 400, it is not a leap year. If a year is divisible by both 100 and 400, it is a leap year. If a year is not divisible by 100 but divisible by 4 is a leap year.	[7M]	1	3
		UNIT-II			
3.	a)	What are access modifiers? Demonstrate the use of each with sample Java code.	[7M]	2	3
	b)	Illustrate the **final** and **this** keywords usage in a Java program.	[7M]	2	3
		OR			
4.	a)	Illustrate the method overriding with sample Java program. Explain why it is required to override a method?	[7M]	2	3
	b)	Give the suitable problem where we need Method Overloading? Explain with sample code.	[7M]	2	3
		UNIT-III			
5.	a)	Discuss the process of dynamic change of array size in Java and explain how it can be implemented.	[7M]	3	3
	b)	Describe the concept of interfaces in Java, including how they are declared, implemented, and inherited.	[7M]	3	3
		OR			
6.	a)	Explain the concept of functional interfaces in Java, including examples of how they can be used and their benefits over traditional interfaces.	[7M]	3	3
	b)	Discuss the use of abstract classes and methods in Java, including the differences between abstract classes and interfaces.	[7M]	3	3
		UNIT-IV			
7.	a)	Describe the concept of wrapper classes in Java and their role in the language using sample Java program.	[7M]	4	3
	b)	Describe some of the key classes and interfaces in the java.util package and their use.	[7M]	4	3
		OR			

8.	a)	Discuss the use of the throw, throws, try, catch, and finally keywords in exception handling in Java	[7M]	4	3
	b)	Explain the concept of checked and unchecked exceptions in Java and the differences between them	[7M]	4	3
		UNIT-V			
9.	a)	Explain the difference between the String class and the CharSequence interface in Java, and provide an example of when you would use each.	[7M]	5	3
	b)	Write a Java program to count the number of even and odd numbers present in an integer array using two simultaneous Threads.	[7M]	5	3
		OR			
10.	a)	Explain the concept of synchronization in Java and how it is used to control access to shared resources.	[7M]	5	3
	b)	Describe the basics of Java Database Connectivity (JDBC) and the steps involved in connecting to a database using JDBC.	[7M]	5	3

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